

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 70.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-008789**Date Inspected:** 27-Aug-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Japan Steel Works**Location:** Muroran, Japan**CWI Name:** Chung Fu Kuan**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower, Jacking, and Deviation Saddles**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. Art Peterson was present during the times noted above for observations relative to the work being performed in Fabrication shop #4 and the Foundry at Japan Steel Works.

Fabrication Shop #4:

Grinding Operation in-process on Stiffener plates of Saddle: Tower Saddle Segment T1-3

The QA Inspector observed JSW personnel performing the grinding operation on the PJP completed groove welds on the stiffener plates welded to the rib, stem and trough of tower saddle T1-3. The completed welds were being ground to a visual acceptable profile prior to Quality Control (QC) Inspector Mr. Chung Fu Kuan performing a visual inspection for acceptance in accordance with the approved shop drawings and AWS D1.5-2002 Section 3.6. The QA Inspector observed that the grinding operation was in-process at the end of the QA Inspectors' shift.

NDT Operation completed on Saddle: West Deviation Saddle Segment W2-W3

The QA Inspector observed that Nikko Inspection Services (NIS) Quality Control (QC) NDT Inspector Mr. R. Kumagai (#132) completed the magnetic particle test (MPT) inspection (dry method) on the partial-joint penetration (PJP) groove welds on the rib plate (built-up section) to rib (cast section) and the stem plate (built-up section) to stem (cast section) prior to the final post weld heat treatment (PWHT) stress relief operation of west deviation saddle segment W2-W3.

Fit-up and Tack-Weld Operation completed on Pipe Sleeves for the West Deviation and West Jacking Saddles

The QA Inspector observed that the fit-up and tack-weld operation was completed on the ASTM A709M Grade

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345 steel flange to ASTM A106 (2") schedule 80 pipe to the lengths of (1008.7), (1019.0), and (1020.7) mm (+ 0 / - 3) for the pipe sleeves on the west deviation and the west jacking saddles.

ABF-RFI-001811R00: Modified MC Shapes for East Saddle Rocker Bearing Plates E2-E1 and E2-W1

1) The QA Inspector observed (2) JSW personnel performing the grinding operation to profile the fillet welds to an acceptable visual profile on the JIS channel fillet welded to the web and upper and lower flanges of the modified miscellaneous channel (MC) shape (13 * 31.8) for east saddle rocker bearing plate E2-E1. See ABF-RFI-001811R00 for the purpose of the modification on the MC shape. On this date, the QA Inspector observed that the total time spent in performing the grinding operation on the fillet welds was (1) hour for (2) JSW personnel.

2) The QA Inspector observed that Nikko Inspection Services (NIS) Quality Control (QC) Non-Destructive Testing (NDT) Inspector Mr. R. Kumagai (#132) completed the magnetic particle test (MPT) inspection (dry method) on the (8) JIS Channel fillet welded to the upper flange, lower flange, and web of the modified MC shape and MPT inspection (dry method) on the bottom flange of modified MC shape fillet welded to the rocker bearing plate around the (70) mm radius cut into the bottom flange at (8) locations on east saddle rocker bearing plate E2-W1. On this date, the QA Inspector observed that the total time spent in performing the MPT inspection on the fillet welds was (2) hours for (1) NIS QC NDT Inspector. The QA Inspector also observed that (1) NIS Certified Weld Inspector (CWI) was present for (1) hour during the MPT Inspection to verify the completion and the test results.

3) The QA Inspector observed that Nikko Inspection Services (NIS) Quality Control (QC) Non-Destructive Testing (NDT) Inspector Mr. H. Houno (#80) completed the magnetic particle test (MPT) inspection (dry method) on the (8) JIS Channel fillet welded to the upper flange, lower flange, and web of the modified MC shape on east saddle rocker bearing plate E2-E1. On this date, the QA Inspector observed that the total time spent in performing the MPT inspection on the fillet welds was (2) hours for (1) NIS QC NDT Inspector. The QA Inspector also observed that (1) NIS Certified Weld Inspector (CWI) was present for (1) hour during the MPT Inspection to verify the completion and the test results.

4) The QA Inspector observed that (2) JSW personnel performed and completed the survey operation on east saddle rocker bearing plate E2-E1 after the rocker bearing plate was re-positioned back on the welding fixture. Prior to the submittal and approval of ABF-RFI-001811R00, JSW personnel had east saddle rocker bearing plate E2-E1 in position to complete the fillet weld operation on the MC shape prior to modification of the MC shape as outlined in ABF-RFI-001811R00. On this date, the QA Inspector observed that the total time spent in performing and completing the survey operation on the rocker bearing plate was (1) hour for (2) JSW personnel.

Foundry:

NDT Operation pending on Saddle: East Saddle E2-E1 (cast saddle)

The QA Inspector observed that the JSW personnel were in preparation in performing the blast cleaning operation on east saddle E2-E1 prior to performing the non-destructive testing (NDT) operation magnetic particle test (MPT) inspection by the (wet method) on 100% of the interior and exterior of the east saddle on areas designated in JSW's Manufacturers Procedure Plan (MPP) as Level 1 areas and on the design drawings as Level 1 areas and the NDT operation ultrasonic test (UT) inspection only on the classified major excavation repair welds and classified minor excavation repair welds.

NDT Operation in-process on Cast Saddle: West Jacking Saddle

The QA Inspector observed Nikko Inspection Services (NIS) Quality Control (QC) Non-Destructive Testing (NDT) Inspector Mr. A. Seino (#82) performing the liquid penetrant test (PT) re-inspection on the ground out

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excavated areas- (3rd time) to ensure the complete removal of defects at various locations on the outside of the trough section, stem section and rib sections of the west jacking saddle. The PT inspection is being performed first on the excavated areas prior to the magnetic particle test (MPT) inspection by the (wet method) as per JSW's manufacturers procedure plan (MPP) for the west jacking saddle. The QA Inspector observed that the PT inspection was in-process on the excavated areas at the end of the QA Inspectors' shift.

Unless otherwise noted, all observations reported on this date appeared to be in general compliance with the applicable contract specifications.

Summary of Conversations:

No significant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy at (510) 385-5910, who represents the Office of Structural Materials for your project.

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| Inspected By: | Peterson,Art | Quality Assurance Inspector |
| Reviewed By: | Guest,Kittric | QA Reviewer |
